

The logo of the Massachusetts Department of Fire Services is a yellow shield with a grey border. At the top, a white banner contains the text "MASS DEPARTMENT OF FIRE SERVICES". In the center is a blue shield featuring a Native American figure holding a bow and arrow, with a five-pointed star above. A white banner at the bottom of the yellow shield reads "COMMONWEALTH OF MASSACHUSETTS".

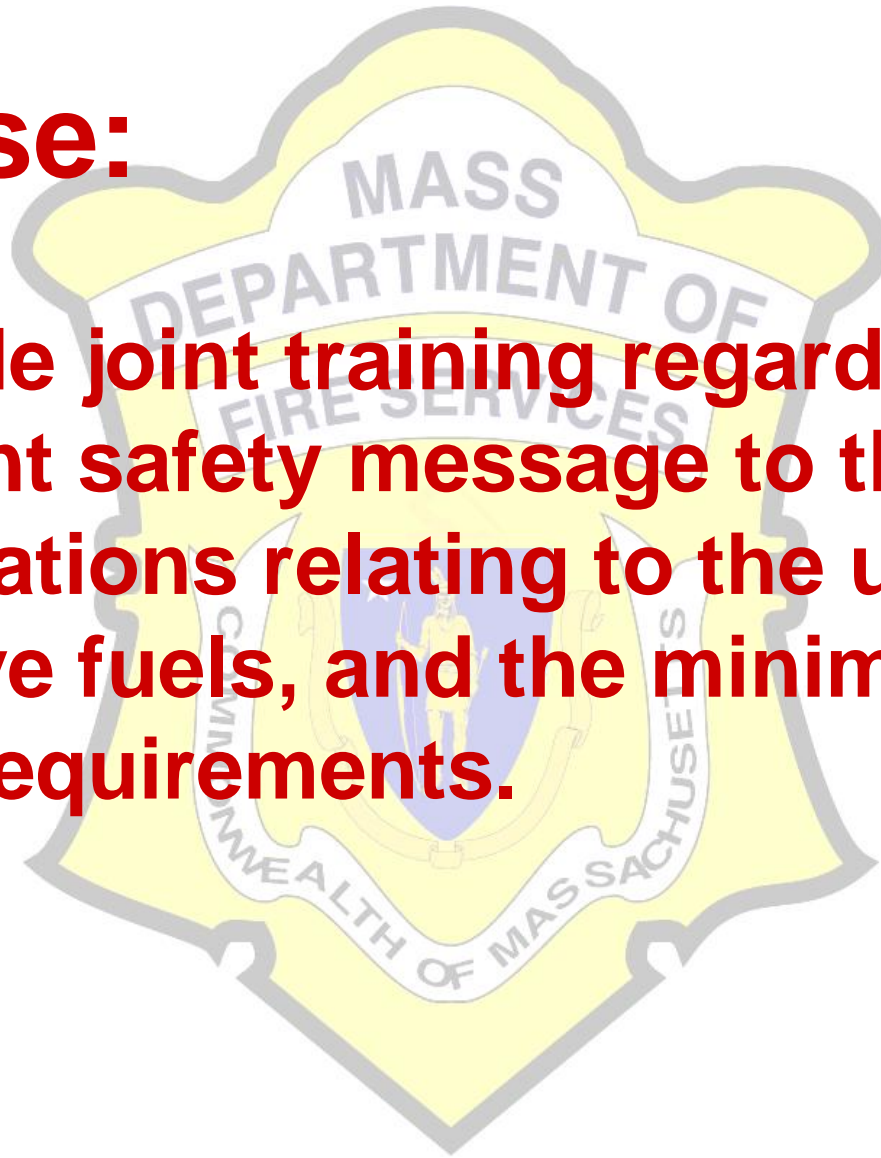
Keep Warm, Keep Safe

***Department of Fire Services
Department of Public Safety
Department of Public Health***

Keep Warm, Keep Safe – Winter 2008

Purpose:

To provide joint training regarding a consistent safety message to the public, the regulations relating to the use of alternative fuels, and the minimum heating requirements.



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2003 - 2007 Statistics

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2003 - 2007 Statistics

Heating Equipment Fires:

(All fuel sources included.)

- 14,075 fires
- 15 civilian deaths
- 98 civilian injuries
- 158 fire service injuries
- More than \$55.9 million in property losses

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2007 Statistics

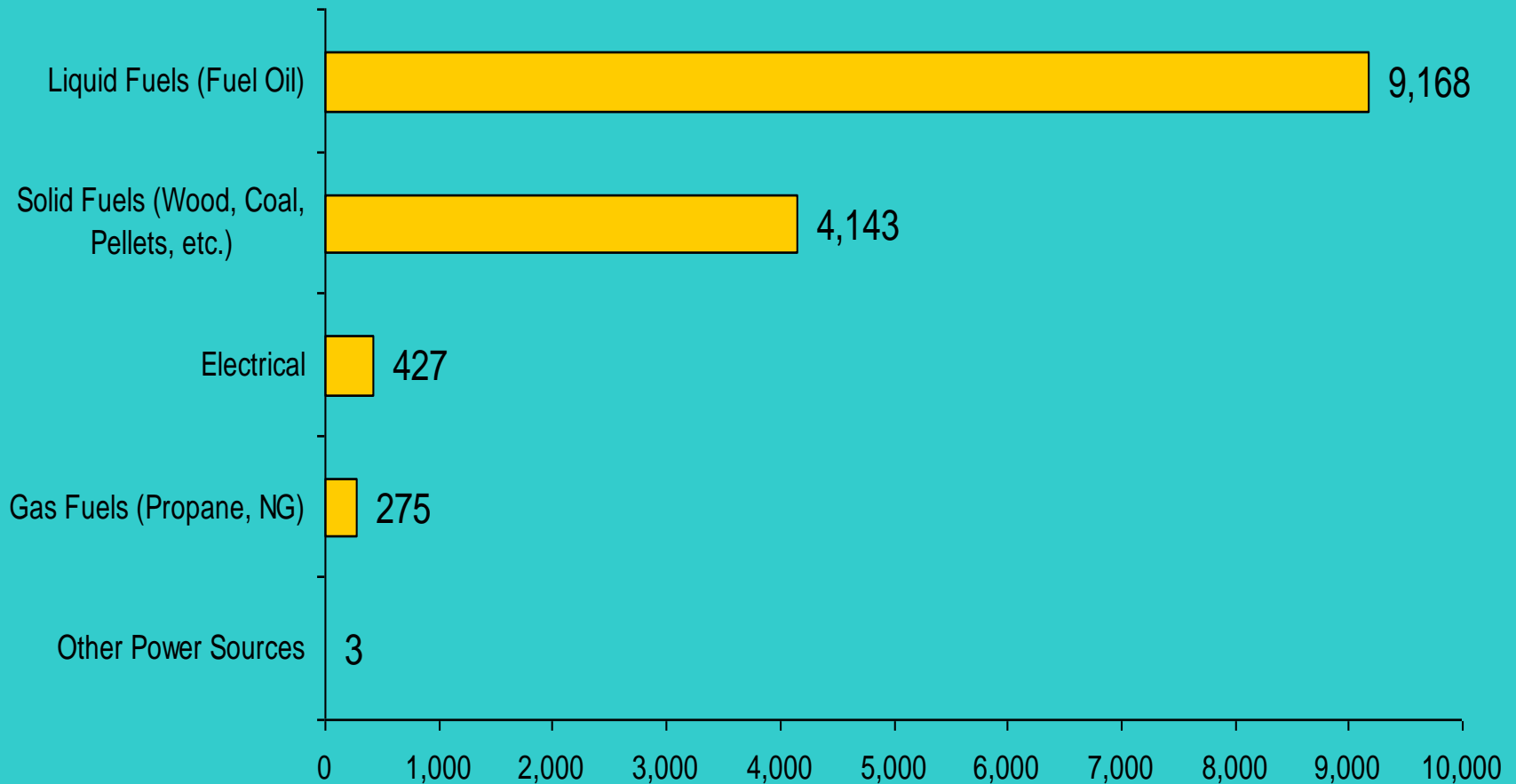
Heating Equipment Fires:

(All fuel sources included.)

- 3,006 fires
- 4 civilian deaths
- 26 civilian injuries
- 35 fire service injuries
- More than \$26.5 million in property losses

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All MA Heating Fires by Power Source 2003 - 2007



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Liquid Fuel Appliances

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Liquid Fuel Appliances

9,168 fires between 2003 and 2007

Resulting in:

- 38 civilian injuries
- 32 fire service injuries
- More than \$4.7 million in property losses

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Liquid Fuel Appliances

The great majority of incidents were due to a fuel burner/boiler malfunction:

- 99.2% (9,096 out of 9,168 incidents)

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Solid Fuel Appliances

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Solid Fuel Appliances

Includes:

- Fireplaces
- Wood stoves
- Pellet stoves
- Coal stoves
- Other Biomass (Corn)

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Solid Fuel Appliances

4,151 fires between 2003 and 2007

Resulting in:

- 3 civilian deaths
- 13 civilian injuries
- 44 fire service injuries
- More than \$12 million in property losses

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Electric Heating Appliances

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Electric Heating Appliances

427 fires between 2003 and 2007

Resulting in:

- 7 civilian deaths
- 28 civilian injuries
- 33 fire service injuries
- More than \$10 million in property losses

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Portable Space Heaters

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Portable Space Heaters

**While these fires are not frequent,
they are deadly!**

**1 of every 10 space heater fires
causes a fatality.**

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Portable Space Heaters

61 fires between 2003 thru 2007

Resulting in:

- 6 civilian deaths
- 10 civilian injuries
- 14 fire service injuries
- Estimated dollar loss of \$3 million

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Portable Space Heaters

19 fires in 2007 alone

Resulting in:

- 3 civilian deaths
- 2 civilian injuries
- 7 fire service injuries

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Portable Space Heaters

Keep the heater 3 feet away from drapes, furniture or other flammable materials.

Place it on a level surface away from areas where someone might bump it and knock it over.

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Portable Space Heaters

If you must use an extension cord, make sure it is a heavy duty cord marked with a power rating at least as high as that on the label of the heater itself.

Never leave a space heater unattended or running while you sleep.

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Gas Fueled Heating Appliances

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Gas Fueled Heating Appliances

275 fires between 2003 and 2007

Resulting in:

- 5 civilian deaths
- 18 civilian injuries
- 39 fire service injuries
- More than \$10 million in property losses

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Carbon Monoxide Poisoning

‘The Silent Killer’

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Carbon Monoxide Poisoning

Heating equipment is the leading cause of CO incidents:

- Improper use.
- Lack of maintenance.

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Carbon Monoxide Poisoning

Between 2003 – 2007:

- 47% of CO calls occurred between the months of November and February.
- 97% of all CO incidents occurred in residential buildings.

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Carbon Monoxide Poisoning

Nicole's Law requiring CO detectors became effective in March 2006.

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527 CMR Regulations

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Oil Burning Equipment

527 CMR 4.00: Oil Burning Equipment



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Oil Burning Equipment

- **Scope:** Applies to the installation of oil burning equipment that has the principal intent of producing heat.
- Includes dual fired units:
 - Wood and/or oil
 - Coal and/or oil

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Oil Burning Equipment

- **527 CMR 4.03(1)(d):** No persons shall make an installation or alteration of any fuel oil burning equipment unless an application for a permit from the local fire department has been submitted.

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Oil Burning Equipment

- **527 CMR 4.03(4)(a):** Fuel oil shall not be delivered to any storage tank unless the deliverer has knowledge that a permit has been obtained.

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Liquefied Petroleum Gas

527 CMR 6.00: Liquefied Petroleum Gas Containers and Systems



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Propane

527 CMR 6.04(1): The local fire department shall approve all LP-Gas installations.

- The fire department is responsible for compliance up to the regulator.
- The plumbing/gas inspector is responsible for compliance beyond the regulator.

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Propane

- **527 CMR 6.08(1)(a):** No person shall install or connect any LP-Gas equipment unless a permit to install has been obtained from the local fire department.

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Fire Prevention

527 CMR 10.00: Fire Prevention, General Provisions

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Unsafe Heating Appliances

- **527 CMR 10.03(7)(b):** The head of the fire department shall order the sealing of any existing stove, oven, furnace, incinerator, boiler or any other heat producing appliance or appliance found to be defective or in violation of code requirements for existing appliances after giving 24 hr. notice.

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Unsafe Heating Appliances

- **527 CMR 10.03(7)(b):** However, the head of the fire department shall order the sealing of any device or appliance without notice when inspection shows the existence of an immediate fire hazard or when imperiling human life.

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Incinerators

- **527 CMR 10.03(7)(d):** Incinerators.
 - Waste matter shall not be burned, under a permit or otherwise, which shall in burning cause or create a dense smoke or odor.
 - On a complaint, the local fire department shall investigate and report to the appropriate authority having jurisdiction.

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Temp. Construction Heaters

527 CMR 20.00: Use and Maintenance
of Temporary Portable Space Heating
Devices and Equipment Used In the
Construction Industry



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Temp. Construction Heaters

- Commonly known as:
 - Salamanders
 - Stoves, or
 - Dryers
- Specifically prohibited in habitable spaces because of carbon monoxide poisoning risks.

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Temp. Construction Heaters

- Can be fueled by either a liquid fuel (kerosene, diesel), or propane.
 - Solid fuel heaters are prohibited per 527 CMR 20.02(1).
 - Propane installations must meet 527 CMR 6.00 and 248 CMR.

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Temp. Construction Heaters

- Must be issued a permit from the local fire department 527 CMR 20.01(2)(a).
- Required to be listed per 527 CMR 20.01(3).

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Unvented Space Heaters

527 CMR 30.00: Unvented Propane or Natural Gas-Fired Space Heaters



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Unvented Space Heaters

- **527 CMR 30.02: Scope**
 - Applies to unvented propane or natural-gas fired space heaters installed in occupancies used in whole or in part for habitation.
 - Does not apply to unvented propane or natural-gas fired space heaters used in inhabitable spaces or those installed in accordance with 527 CMR 20.00.

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Carbon Monoxide Alarms

527 CMR 31.00: Carbon Monoxide Alarms



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Carbon Monoxide Alarms

- 527 CMR 31.01: Purpose and Scope
 - CO alarms must be installed in every dwelling, residential building or structure that:
 - Contains fossil-fuel* burning equipment, or
 - Incorporates enclosed parking within its structure.

* Fossil-fuel - fuel of any kind which emits CO as a product of combustion.

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Life Safety

If in the course of an inspection, it is noticed that a building does not have the appropriate smoke and/or CO protection, then the Local Fire Chief shall be notified of the potential violation.

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